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? WHY THE WEATHER ?

Dr. Charles F. Brooks,  
of Clark University,  
says:

CONDUCTION STORES HEAT IN GROUND

While the character of a surface, whether light or dark, wet or dry, determines to a large extent how much it may heat in the daytime, the conductivity of the ground is also important in controlling ground temperatures. Only the surface layer of the ground is directly heated by radiation, the lower layers are warmed more, or less according to whether the substance conducts heat well, or poorly. Granite will heat to a greater depth than sand, and so will store more heat and remain warmer at night. So poorly does sand conduct heat that at a desert station a daily range of 49 degrees Fahrenheit was observed at the surface, while the change from day to night was only one degree at a depth of 16 inches. Snow contains so much air that it is even a worse conductor than sand. A snow cover acts like a layer of sand two or three times as thick. Vegetation acts similarly as an insulator. Observations show that vegetation may cut to two thirds the annual heat exchange of bare ground.

It is the slowness of conduction in the ground that is responsible for the smallness of the amount of heat stored, and for the constancy of temperature found at depths of only a few yards.

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(Tomorrow: How the South Wind Makes Rain)

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